

USSN 09/523,491

Current Status of All Claims in Application/Amendments

1 (canceled).

2 (canceled).

3 (canceled).

4 (canceled).

5 (canceled).

6 (canceled).

7 (presently amended). A method for producing a solid material comprising a

thin film of metal on a solid substrate surface, said method comprising:

(a) contacting said solid substrate surface with a metal halide of a metal selected from the group consisting of tungsten, rhenium, molybdenum, antimony, selenium, thallium, chromium, platinum, ruthenium, iridium, and germanium under conditions including a temperature from 425 to 600 K sufficient to produce a metal halide surface;

(b) contacting said metal halide surface with a silylating agent under conditions including a temperature from 425 to 600 K sufficient to produce a metal-silicon surface; and

(c) contacting said metal-silicon surface with metal halide under conditions including a temperature from 425 to 600 K sufficient to produce said thin metal film surface.

8 (original). The method of Claim 7, wherein said solid substrate surface comprises a group selected from oxides, nitrates, metals, semiconductors, polymers with a functional group, and mixtures thereof.

9 (original). The method of Claim 7 further comprising contacting said solid surface with the silylating agent prior to said step (a).

10 (original). The method of Claim 9, wherein said solid substrate surface comprises a hydroxide.

11 (canceled).

12 (canceled).

13 (original). The method of Claim 12 7, wherein said metal halide is tungsten fluoride.

USSN 09/523,491

14 (original). The method of Claim 7, wherein the silylating agent comprises silane, disilane, trisilane and mixtures thereof.

15 (original). The method of Claim 7, wherein said thin metal film surface comprises metal-metal halide surface.

16 (presently amended). The method of Claim 15 ~~7~~ further comprising repeating said steps (b) and (c) to obtain a desired thickness of said metal film.

17 (presently amended). A method for forming a thin metal film on a solid substrate surface comprising:

(a) contacting said solid substrate surface with a ~~metal~~ fluoride of a metal selected from the group consisting of tungsten, rhenium, molybdenum, antimony, selenium, thallium, chromium, platinum, ruthenium, iridium, and germanium under conditions including a temperature of from 425 to 600 K sufficient to produce a metal fluoride surface;

(b) contacting said metal fluoride surface with a silylating agent under conditions including a temperature of from 425 to 600K sufficient to produce a metal-silicon surface; and

(c) contacting said metal-silicon surface with metal fluoride under conditions including a temperature of from 425 to 600K sufficient to form a thin metal film on the solid substrate.

18 (canceled).

19 (canceled).

20 (original). The method of claim 17, wherein said thin metal film surface comprises metal-metal halide surface.

21 (presently amended). The method of Claim 20 ~~17~~ further comprising repeating said steps (b) and (c) to obtain a desired thickness of said metal film.

22 (original). The method of Claim 17, wherein said solid substrate surface comprises a group selected from oxides, nitrates, metals, semiconductors, polymers with a functional group, and mixtures thereof.

23 (original). The method of Claim 17 further comprising contacting said solid substrate surface with the silylating agent prior to said step (a).

24 (original). The method of Claim 23, wherein said solid substrate surface comprises a hydroxide.

25 (withdrawn).

26 (withdrawn).

USSN 09/523,491

27 (withdrawn).

28 (withdrawn).

29 (withdrawn).

30 (withdrawn).

31 (withdrawn).

32 (withdrawn).

33 (withdrawn).

34 (withdrawn).

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cancel*

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